

CLAIM AMENDMENTS:

Please amend the claims as follows:

1. (Currently amended) A device for realizing an online element analysis for a substance ~~[[S]]~~ to be measured that is conveyed past or flows past a measuring station, said device comprising:

- a conveying device ~~[[51] for]]~~ configured to continuously convey the substance to be measured; and
- ~~[[a]]~~ the measuring station ~~[[with]]~~ , further comprising an X-ray source ~~[[10]]~~ and an X-ray fluorescence detector ~~[[20]]~~ having a radiation inlet, ~~characterized in that at least one wherein a~~ first X-ray conductor extends from the radiation inlet of the X-ray fluorescence detector ~~[[20]]~~ in ~~[[the]]~~ a direction of the conveying device ~~[[51]]~~.

2. (Currently amended) The device according to claim 1 ~~characterized in that at least wherein~~ a second X-ray conductor extends from the X-ray source ~~[[10]]~~ in the direction of the conveying device.

3. (Currently amended) The device according to claim 1 ~~characterized in that~~ 2 wherein at least one of the first and/or and the second X-ray conductor each consist of at least comprises one or more hollow ~~[[tube]]~~ tubes.

4. (Currently amended) The device according to claim 3, ~~characterized in that~~
~~the~~ wherein at least one hollow tube ~~in part~~ is at least partly made of glass.

5. (Currently amended) The device according to claim 4, ~~characterized in that~~
~~the~~ wherein at least one hollow tube is a glass capillary ~~(30, 40)~~.

6. (Currently amended): The device according to claim 3, ~~characterized in that~~
wherein at least ~~[[some]]~~ one of the hollow tubes ~~[[are]]~~ is provided with a window
~~[[(30b)]]~~ at ~~[[the]]~~ an end thereof facing the conveying device.

7. (Currently amended) The device according to claim 3, ~~characterized in that~~
wherein at least ~~[[some]]~~ one of the hollow tubes ~~[[are]]~~ is filled with hydrogen or
helium.

8. (Currently amended) The device according to claim 3, ~~characterized in that~~
~~at least some of the hollow tubes are connected to a helium source (28) and are~~
~~flushed with helium during the operation~~ 7, wherein several first and several
second X-ray conductors exist and are combined so as to create a matrix-type
structure.

9. (Currently amended) The device according to claim 2, ~~characterized in that~~
~~the first and the second X-ray conductors are combined in such a way that a~~

~~bundle of at least two X-ray conductors is formed at the X-ray conductor ends facing the conveying device 7, wherein at least one second X-ray conductor and plural first X-ray conductors are provided, said plural first X-ray conductors arranged around the at least one second X-ray conductor, at least at an end of said at least one second X-ray conductor facing the conveying device.~~

10. (Currently amended) The device according to claim 7, ~~characterized in that several first and several second X-ray conductors exist and these are combined so as to create a matrix-type structure wherein axes of the second X-ray conductor and the first X-ray conductor jointly enclose an acute angle in the direction of the conveying device.~~

11. (Currently amended) The device according to claim 8, ~~characterized in that the axes of the X-ray conductors are parallel to each other at the end facing the conveying device 10, wherein the substantially equal angle is a flat angle.~~

12. (Currently amended) The device according to ~~claim 7,~~ characterized in that ~~at least one second X-ray conductor and several first X-ray conductors are provided, which are arranged around the second X-ray conductor, at least at the end facing the conveying device (51)~~ claim 3, wherein at least one of the hollow tubes is connected to a helium source and is flushed with helium.

13. (Currently amended) The device according to claim ~~[[7]]~~ 2, ~~characterized in that the axes of at least one~~ wherein the first and the second X-ray conductor and at least one first X-ray conductor jointly enclose an acute angle in the direction of the conveying device conductors are combined in such a way that a bundle of at least two X-ray conductors is formed at ends of the X-ray conductors facing the conveying device.

14. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein at least one thermal shield ~~[[59]]~~ is disposed between the X-ray fluorescence detector ~~[[20]]~~ and the conveying device ~~[[51]]~~.

15. (Currently amended) The device according to claim 1, ~~characterized in that it is provided with~~ further comprising a distance sensor for measuring ~~[[the]]~~ a height of ~~[[the]]~~ a sample surface.

16. (Currently amended) The device according to claim 15, ~~characterized in that~~ wherein the distance sensor is a laser distance sensor ~~[[60]]~~.

17. (Currently amended) The device according to claim 16, ~~characterized in that~~ wherein a waveguide ~~[[61]]~~ is connected to the laser distance sensor ~~[[60]]~~ to permit ~~[[a]]~~ remote distance ~~measuring~~ measurement.

18. (Cancelled)

19. (Currently amended) The device according to claim 1, ~~characterized in that~~
wherein an X-ray split lens ~~[(12)]~~ for ~~[[the]]~~ parallel alignment of ~~[[the]]~~ X-rays is
disposed in ~~[[the]]~~ a beam path from the X-ray source ~~[(10)]~~.

20. (Currently amended) The device according to claim 1, ~~characterized in that~~
wherein a filter ~~[(42)]~~ or a monochromatic element is arranged in ~~[[the]]~~ a beam
path from the X-ray source.

21. (Currently amended) The device according to claim 1, ~~characterized in that~~
~~a polarizer (44) is arranged in the beam path from the X-ray source~~ claim 20,
wherein the filter functions as a window.

22. (Currently amended) The device according to claim 1, ~~characterized in that~~
wherein the first X-ray conductor and ~~[[the]]~~ exciting radiation from the X-ray
source ~~essentially have the same~~ are at a substantially equal angle relative to
~~[[the]]~~ a sample surface.

23. (Currently amended) The device according to claim 13, ~~characterized in~~
~~that the angle is a flat angle 1,~~ wherein a polarizer is arranged in a beam path
from the X-ray source.

AMENDMENT

10/519,383

24. (Currently amended) The device according to claim 21, ~~characterized in that~~ wherein the flat angle corresponds to ~~[[the]] a~~ Brewster angle for the polarized radiation polarized by the polarizer.

25. (Cancelled).

26. (Currently amended) The device according to claim 1, ~~characterized in that~~ wherein the measuring station is arranged on a traversing and/or pivoting carriage.

27. (New) A device for realizing an online element analysis for a substance to be measured that is conveyed past or flows past a measuring station, said device comprising:

- a conveying device for the substance to be measured; and
- the measuring station, further comprising an X-ray source and an X-ray fluorescence detector having a radiation inlet,

wherein a first X-ray conductor extends from the radiation inlet of the X-ray fluorescence detector in a direction of the conveying device,

wherein a second X-ray conductor extends from the X-ray source in the direction of the conveying device,

wherein at least one of the first and the second X-ray conductor comprises at least one hollow tube,

wherein the at least one hollow tube comprises a plurality of hollow tubes and at least one of the plurality of hollow tubes is connected to a helium source and is flushed with helium,

wherein axes of the X-ray conductors are parallel to each other at ends of said X-ray conductors facing the conveying device.

28. (New) A device for realizing an online element analysis for a substance to be measured that is conveyed past or flows past a measuring station, said device comprising:

- a conveying device for the substance to be measured; and
- the measuring station, further comprising an X-ray source and an X-

ray fluorescence detector having a radiation inlet,

wherein a first X-ray conductor extends from the radiation inlet of the X-ray fluorescence detector in a direction of the conveying device,

further comprising a distance sensor for measuring a height of a sample surface,

wherein the distance sensor is a laser distance sensor,

wherein a waveguide is connected to the laser distance sensor to permit remote distance measurement,

wherein the waveguide forms a bundle together with the first X-ray conductor.